

(Original) 1. A method for preparing a photoresist layer for e-beam inspection comprising:

5 out-gassing said photoresist layer whereby an outgas from
said photoresist layer during said e-beam inspection is
substantially prevented.

(Original) 2. The method for of claim 1 wherein:

10 said step of out-gassing said photoresist layer further comprising a step of implanting ions into said photoresist layer to activate an out-gassing from said photoresist layer.

15 (Original) 3. A method for preparing a photoresist layer for e-beam
inspection comprising:

increasing a conductivity of said photoresist layer whereby electric charging of said photoresist layer during said e-beam inspection is substantially prevented.

20

(Original) 4. The method for of claim 3 wherein:

25 said step of increasing a conductivity of said photoresist layer further comprising a step of implanting conductive ions into said photoresist layer to increase a conductivity of said photoresist layer.

(Original) 5. The method for of claim 3 wherein:

30 said step of increasing a conductivity of said photoresist layer further comprising a step of implanting carbon ions into said photoresist layer.

(Original) 6. The method for of claim 3 wherein:

5 said step of increasing a conductivity of said photoresist layer further comprising a step of implanting indium ions

 into said photoresist layer.

(Original) 7. The method for of claim 3 wherein:

10 said step of increasing a conductivity of said photoresist layer further comprising a step of implanting Sb ions into

 said photoresist layer.

(Original) 8. The method for of claim 3 wherein:

15 said step of increasing a conductivity of said photoresist layer further comprising a step of implanting silicon ions

 into said photoresist layer.

(Original) 9. The method for of claim 3 wherein:

20 said step of increasing a conductivity of said photoresist layer further comprising a step of implanting metallic ions

 into said photoresist layer.

25 (Original) 10. The method for of claim 3 wherein:

 said step of increasing a conductivity of said photoresist layer further comprising a step of implanting a conductive

 ions at an implanting energy approximately 1000 ev into

30 said photoresist layer.

(Original) 11. The method for of claim 3 wherein:

5 said step of increasing a conductivity of said photoresist layer further comprising a step of implanting a conductive ions having an ion dosage in a approximate range $10^{16} / \text{cm}^2$ to $10^{18} / \text{cm}^2$ into said photoresist layer.

(Original) 12. The method for of claim 3 wherein:

10 said step of increasing a conductivity of said photoresist layer further comprising a step of plasma immersing ion implant a conductive ions into said photoresist layer.

(Original) 13. The method for of claim 3 further comprising:

15 out-gassing said photoresist layer whereby an outgas from said photoresist layer during said e-beam inspection is substantially prevented.

20 (Original) 14. The method for of claim 13 wherein:

25 said step of out-gassing said photoresist layer further comprising a step of implanting ions into said photoresist layer to activate an out-gassing from said photoresist layer.

(Withdrawn) 15. A scanning electronic microscope (SEM) system for scanning a photoresist layer disposed on a semiconductor substrate for integrated circuit manufacture comprising:

5 a SEM disposed above said photoresist layer for projecting a scanning electronic beam (e-beam) thereto wherein said photoresist layer having an out-gas content less than 0.5 percents thus substantially prevent out-gassing from said photoresist layer during said SEM projecting said e-beam onto said photoresist layer.

10 (Withdrawn) 16. A scanning electronic microscope (SEM) system for scanning a photoresist layer disposed on a semiconductor substrate for integrated circuit manufacture comprising:

15 a SEM disposed above said photoresist layer for projecting a scanning electronic beam (e-beam) thereto wherein said photoresist layer having an electric resistivity less than 2000 ohm/cm² thus substantially prevent an electric charging of said photoresist layer during said SEM projecting said e-beam onto said photoresist layer.

20 (Withdrawn) 17. A scanning electronic microscope (SEM) system for scanning a photoresist layer disposed on a semiconductor substrate for integrated circuit manufacture comprising:

25 a SEM disposed above said photoresist layer for projecting a scanning electronic beam (e-beam) thereto wherein said photoresist layer having implanted conductive ions for increasing a conductivity of said photoresist layer.

(Withdrawn) 18. The scanning electronic microscope (SEM) system for scanning a photoresist layer for of claim 17 wherein:

5 said implanted conductive ions further comprising implanted carbon ions.

(Withdrawn) 19. The photoresist layer for of claim 17 wherein:

10 said implanted conductive ions further comprising implanted indium ions.

(Withdrawn) 20. The photoresist layer for of claim 17 wherein:

15 said implanted conductive ions further comprising implanted Sb ions.

(Withdrawn) 21. The photoresist layer for of claim 17 wherein:

20 said implanted conductive ions further comprising implanted silicon ions.

(Withdrawn) 22. The photoresist layer for of claim 17 wherein:

25 said implanted conductive ions further comprising implanted metallic ions.